

Notice of Allowability

Application No.

10/807,306

Examiner

Isiaka O. Akanbi

Applicant(s)

TANAKA, HIROSHI

Art Unit

2886

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed on 04 September 2007.
2. ☒ The allowed claim(s) is/are 30 and 32-44.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04 September 2007 has been entered.

Response to Arguments

Applicant's arguments/remarks, (see pages 6-9), filed on 04 September 2007, with respect to claim(s) 30 and 32-44 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

Applicant argues that the cited references Tanaka (6,949, 755 B2 and 5,249,016) fail to disclose, as recited in claims 30 and 32 the features of evaluation of reliability of the extracted position of the target mark, selection of the second mark, instead of the target mark, from the plurality of marks as a new target mark, based on the identified first mark, if the evaluated reliability is less than the threshold as specified and described in the specification. This argument is persuasive. Therefore, the rejections are withdrawn.

Allowable Subject Matter

Claims 30 and 32-44 are allowed.

As to claim 30, the prior art of record, taken alone or in combination, fails to disclose or render obvious to extract, from an image sensed by said scope at the second magnification, a position of the target mark, to evaluate reliability of the extracted position of the target mark, to select a second mark, instead of the target mark, from the plurality of marks as a new target mark based on the identified first mark, if the evaluated reliability is less than a threshold, and to extract a position of the selected second mark from an image sensed by said scope at the second magnification; and a controller configured to control a position of said stage based on the extracted position of the second mark, in combination with the rest of the limitations of the claim. Claims 33-44 are allowable by virtue of their dependency.

As to claim 32, the prior art of record, taken alone or in combination, fails to disclose or render obvious extracting, from the second image, a position of the target mark; evaluating reliability of the extracted position of the target mark; selecting a second mark, different from the target mark, from the plurality of marks as a new target mark based on the evaluated reliability and the identified first mark; and extracting a position of the selected second mark from an image sensed at the second magnification, in combination with the rest of the limitations of the claim.

Prior Art

The reference of Tanaka (5,249,016)(figs. 4,5, 7 and 9) discloses plurality of marks. However Tanaka fails to disclose, teach or suggest an alignment method comprising,

a apparatus/method of detecting a position of a target mark out of a plurality of marks in a region of an object to obtain a position of the region of the object comprising the steps of, extracting, from the second image, a position of the target mark; evaluating reliability of the extracted position of the target mark; selecting a second mark, different from the target mark, from the plurality of marks as a new target mark based on the evaluated reliability and the identified first mark; and extracting a position of the selected second mark from an image sensed at the second magnification, as specified in the present application specification.

Conclusion

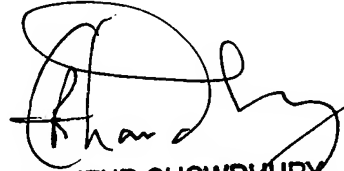
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isiaka Akanbi whose telephone number is (571) 272-8658. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur R. Chowdhury can be reached on (571) 272-2287. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isiaka Akanbi

November 13, 2007



TARIFUR CHOWDHURY
SUPERVISORY PATENT EXAMINER